

Dongfeng Cummins Curve and Datasheet

Engine Type: ISDe210 30(Bus)

Curve Number: FR92162

Rev00 Date of Issue: 05/20/2007



Dongfeng Cummins Engine Co.,Ltd

Engine Performance Curve FR92162

EURO 3

Engine Model: ISDe230 30

Engine Configuration: D313003BX03

Advertised Power: 169 kW @ 2500 rpm

230 PS @ 2500 rpm

CPL: 1998

Peak Torque: 900 N.m @ 1400 rpm

Displacement: 6.7L

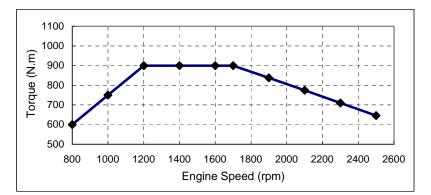
Bore: 107 mm

Aspiration: Turbocharged & Charge Air Cooled

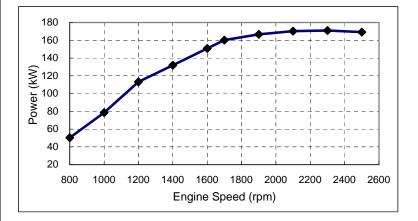
Cylinders: 6

Fuel System: Bosch (HPCR)

Stroke: 124 mm



Torque							
rpm	N.m						
800	600						
1000	750						
1200	900						
1400	900						
1600	900						
1700	900						
1900	838						
2100	774						
2300	710						
2500	646						



	Power	
rpm		kW
800		50
1000		79
1200		113
1400		132
1600		151
1700		160
1900		167
2100		170
2300		171
2500		169

Performance data shown is nominal, and is to 80/1269/EEC(as amended) conditions of 990mbar barometric pressure and 25 deg C air intake temperature.

All data are based on the engine operating with fuel system, water pump, lubricating oil pump and with inle restriction and exhaust restriction at or below datasheet limits. Not included are compressor, fan, alternator, optional equipment and driven components.



Dongfeng Cummins Engine Co.,Ltd

Engine Performance Curve FR92162

Compression Ratio: 17.3:1 Air Intake System Max. temperature rise between ambient air and turbo air inlet: - ℃ 15 Max. intake restriction with dry type air cleaner, with clean filter - kPa 2.9 Medium Duty: - kPa 3.7 Meav. puty: - kPa 6.2 Max. intake restriction with dirty filter: - kPa 6.2 Charge Air Cooling - ℃ 30 Max. temperature rise between ambient air and intake manifold: - ℃ 30 Max. △P between turbo out and manifold in: - kPa 13.5 Intake pipe size normally acceptable: - mm dia 65 Exhaust System Max. back pressure imposed by complete exhaust system: - kPa 10 Exhaust pipe size normally accepable: - mm dia 75 Cold Start Performance - mm dia 75 Min. unaided cold start temperature: - 12 ℃ @ 120 average rpm Min. aided cold start temperature: - 24 ℃ @ 120 average rpm	General	
Max. temperature rise between ambient air and turbo air inlet:		GB 17691-2005
Max. temperature rise between ambient air and turbo air inlet: - ℃ 15 Max. intake restriction with dry type air cleaner, with clean filter - kPa 2.9 Medium Duty: - kPa 3.7 Meav. Duty: - kPa 6.2 Max. intake restriction with dirty filter: - kPa 6.2 Charge Air Cooling - ℃ 30 Max. temperature rise between ambient air and intake manifold: - ℃ 30 Max. △P between turbo out and manifold in: - kPa 13.5 Intake pipe size normally acceptable: - mm dia 65 Exhaust System Max. back pressure imposed by complete exhaust system: - kPa 10 Exhaust pipe size normally accepable: - mm dia 75 Cold Start Performance Min. unaided cold start temperature: - 12 ℃ 2120 average rpm Min. aided cold start temperature: - 24 ℃ 2120 average rpm Performance Data Idle Speed: - rpm 600 - 800 Maximum no load governed speed: - rpm 2850 Maximum over speed capability(15secs max.): - rpm 4200 Maximum altitude for continuous operation: - m TBD Clutch engagement torque at 800rpm: - N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: - kPa 413	Compression Ratio:	17.3:1
Max. intake restriction with dry type air cleaner, with clean filter Ac Pa 2.9 Heavy Duty:	Air Intake System	
Heavy Duty:	·	15
Max. intake restriction with dirty filter:	Medium Duty: kPa	2.9
Charge Air Cooling Max. temperature rise between ambient air and intake manifold: Max. △P between turbo out and manifold in: Intake pipe size normally acceptable: - mm dia 65 Exhaust System Max. back pressure imposed by complete exhaust system: Exhaust pipe size normally accepable: - mm dia 75 Cold Start Performance Min. unaided cold start temperature: -12 ℃ @120 average rpm Min. aided cold start temperature: -24 ℃ @120 average rpm Performance Data Idle Speed: Maximum no load governed speed: Maximum no load governed speed: Maximum over speed capability(15secs max.): Maximum over speed capability(15secs max.): Maximum altitude for continuous operation: - m TBD Clutch engagement torque at 800rpm: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: - kPa 413	Heavy Duty: kPa	3.7
Max. temperature rise between ambient air and intake manifold: - ℃ 30 Max. △P between turbo out and manifold in: - kPa 13.5 Intake pipe size normally acceptable: - mm dia 65 Exhaust System Max. back pressure imposed by complete exhaust system:	Max. intake restriction with dirty filter:	6.2
Max. temperature rise between ambient air and intake manifold: - ℃ 30 Max. △P between turbo out and manifold in: - kPa 13.5 Intake pipe size normally acceptable: - mm dia 65 Exhaust System Max. back pressure imposed by complete exhaust system:	Charge Air Cooling	
Intake pipe size normally acceptable: mm dia 65 Exhaust System Max. back pressure imposed by complete exhaust system: kPa 10 Exhaust pipe size normally accepable: mm dia 75 Cold Start Performance Min. unaided cold start temperature:12 ℃ @120 average rpm Min. aided cold start temperature:24 ℃ @120 average rpm Min. aided cold start temperature:24 ℃ @120 average rpm Min. aided cold start temperature: rpm 600 - 800 Performance Data Idle Speed: rpm 600 - 800 Maximum no load governed speed: rpm 2850 Maximum over speed capability(15secs max.): rpm 4200 Maximum altitude for continuous operation: m TBD Clutch engagement torque at 800rpm: N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: kPa 413		30
Exhaust System Max. back pressure imposed by complete exhaust system: Exhaust pipe size normally accepable: — mm dia 75 Cold Start Performance Min. unaided cold start temperature: — 12 ℃ @ 120 average rpm Min. aided cold start temperature: — 24 ℃ @ 120 average rpm Performance Data Idle Speed: — rpm 600 - 800 Maximum no load governed speed: — rpm 2850 Maximum over speed capability(15secs max.): — rpm 4200 Maximum altitude for continuous operation: — m TBD Clutch engagement torque at 800rpm: — N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: — kPa 413	Max. △P between turbo out and manifold in: kPa	13.5
Max. back pressure imposed by complete exhaust system: - kPa 10 Exhaust pipe size normally accepable: - mm dia 75 Cold Start Performance Min. unaided cold start temperature: Min. aided cold start temperature: -24 ℃ @ 120 average rpm Min. aided cold start temperature: -24 ℃ @ 120 average rpm Performance Data Idle Speed: - rpm 600 - 800 Maximum no load governed speed: - rpm 2850 Maximum over speed capability(15secs max.): - rpm 4200 Maximum altitude for continuous operation: - m TBD Clutch engagement torque at 800rpm: - N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: - kPa 413	Intake pipe size normally acceptable: mm dia	65
Exhaust pipe size normally accepable: - mm dia 75 Cold Start Performance Min. unaided cold start temperature: -12 °C @ 120 average rpm Min. aided cold start temperature: -24 °C @ 120 average rpm Performance Data Idle Speed: - rpm 600 - 800 Maximum no load governed speed: - rpm 2850 Maximum over speed capability(15secs max.): - rpm 4200 Maximum altitude for continuous operation: - m TBD Clutch engagement torque at 800rpm: - N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: - kPa 413	Exhaust System	
Min. unaided cold start temperature:	Max. back pressure imposed by complete exhaust system: kPa	10
Min. unaided cold start temperature:	Exhaust pipe size normally accepable: mm dia	75
Min. aided cold start temperature: -24 °C @ 120 average rpm Performance Data Idle Speed: -rpm 600 - 800 Maximum no load governed speed: -rpm 2850 Maximum over speed capability(15secs max.): -rpm 4200 Maximum altitude for continuous operation: -m TBD Clutch engagement torque at 800rpm: -N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: -kPa 413	Cold Start Performance	
Min. aided cold start temperature: -24 °C @ 120 average rpm Performance Data Idle Speed: -rpm 600 - 800 Maximum no load governed speed: -rpm 2850 Maximum over speed capability(15secs max.): -rpm 4200 Maximum altitude for continuous operation: -m TBD Clutch engagement torque at 800rpm: -N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: -kPa 413	Min. unaided cold start temperature:12 ℃ @	120 average rpm
Idle Speed: - rpm 600 - 800 Maximum no load governed speed: - rpm 2850 Maximum over speed capability(15secs max.): - rpm 4200 Maximum altitude for continuous operation: - m TBD Clutch engagement torque at 800rpm: - N.m 610 When using exhaust brakes: - kPa 413	·	.
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Maximum over speed capability(15secs max.): -rpm 4200 Maximum altitude for continuous operation: -m TBD Clutch engagement torque at 800rpm: -N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: -kPa 413	Idle Speed: rpm	600 - 800
Maximum over speed capability(15secs max.): -rpm 4200 Maximum altitude for continuous operation: -m TBD Clutch engagement torque at 800rpm: -N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: -kPa 413	Maximum no load governed speed:rpm	2850
Maximum altitude for continuous operation: - m TBD Clutch engagement torque at 800rpm: - N.m 610 When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: - kPa 413		4200
Clutch engagement torque at 800rpm:		
When using exhaust brakes: Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: kPa 413	·	
Exhaust pressure, at 2850rpm, at turbocharger outlet, must not exceed: kPa 413		010
		440
Approximate engine retardation:kW TBD	, , , , , , , , , , , , , , , , , , , ,	_
	Approximate engine retardation: kW	IRD

Engine	Oil Air	Air to	Air to Air Fro	m Turbo	Exhaust	Exhaust	Fuel	Coolant	Heat Rejection		Friction
Speed RPM	Pressure kPa	Turbo m³/min	Flow kg/min	Pressurek Pa	Flow m³/min	Temp ℃	Consumption kg/hr	Flow I/min	Coolant kW	Air kW	Power kW
2500	302.8	14.95		150.7		439.661	220	255.95	82.8	27.6	38.0
2300	300.9	14.34		154.3		501.4		235.8333	85.7	26.9	30.6
1400	205.7	8.62		130.4		519.06		145.7833	65.0955	15.8324	16.7

All values within ±5% Base engine data refer to Datasheet D313003BX03

All data subject to change without notice. Dongfeng Cummins Engine Co., Ltd